Message

From: Peter Thomas [pthomas@manuregy.com]

Sent: 10/20/2017 5:53:16 PM

To: 'Tom Richard' [trichard@psu.edu]

CC: 'Mary Ann Bruns' [mvb10@psu.edu]; 'cmw29' [cmw29@psu.edu]; Richard Stehouwer [rcs15@psu.edu]; 'PEGGY

PLUNKETT' [pup89@psu.edu]

Subject: More evidence of N emissions reductions by biochar

Attachments: Value of biochar in mitigation of gaseous emission of nitrogen.pdf

Tom, Mary Ann, et al,

Attached is yet another study in which it has been demonstrated that biochar significantly reduces the gaseous emissions of nitrogen from agricultural soils.

Each of our gasifiers produces 70 to 80 tons of biochar per week, and two, three or four gasifiers can be installed side-by-side on a 1-acre plot in order to produce multiples of these tonnages each week. For more than decade, there has been a lot of talk and there have been dozens of studies and reports about nitrogen and phosphorus trading in the Chesapeake Bay watershed. However, there is no demand for either N or P trading credits, therefore there is no market for the nitrogen emissions reductions that could be achieved by biochar's use in agriculture, or even when we process nitrogen-rich spent mushroom substrate, poultry litter, duck manure and egg layer manure in southeastern Pennsylvania. There is, however, a market for steam activating our biochar and selling it as a filtration media to municipal wastewater treatment plants, and we continue to actively pursue this large-scale market.

Regards,

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